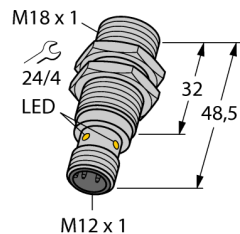


Inductive sensor
Stainless steel front
BI10-EG18F-AP6X-H1141

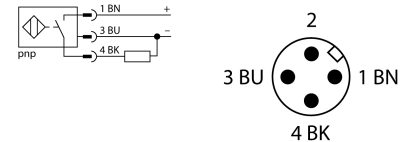
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- Threaded barrel, M18 x 1
- Stainless steel, 1.4305
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring Diagram



Functional principle

The inductive all-metal switches operate on the basis of the electromagnetic pulse method. Unlike standard inductive sensors, the magnetic field is not generated through oscillation but through short, periodic current pulses flowing through the coil. The magnetic field induces voltage in the object to be detected, which, for its part creates a current flow in this object. After switching off the current pulse, the current in the object also drops, now inducing voltage back in the emitter coil. This voltage is the wanted signal and remains unaffected by energy dissipation in the magnetic field. Only non-ferromagnetic or poorly conductive metals provide a low signal.

Type designation	BI10-EG18F-AP6X-H1141
Ident-No.	4614708
Rated switching distance Sn	10 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 1; Cu=0.8; stainless steel 1mm = 0.5; stainless steel 2mm = 0.9; Ms = 1.2
Repeat accuracy	$\leq 5\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 20\% U_{in}$
DC rated operational current	≤ 200 mA
No-load current I_0	≤ 10 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_0	≤ 2 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.2 kHz
Design	Threaded barrel, M18 x 1
Dimensions	48.5 mm
Housing material	Stainless steel, V2A (1.4305)
Active area material	Stainless steel, 1.4305 (AISI 303)
End cap	Metal
Admissible pressure on front cap	≤ 60 bar
Max. tightening torque housing nut	50 Nm
Electrical connection	Connector, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68/IP69K
MTTF	377 years acc. to SN 29500 (Ed. 99) 20 °C
Packaging unit	1
Switching state	LED, Yellow, LED flashing: 0.8 s, $< s \leq s$,

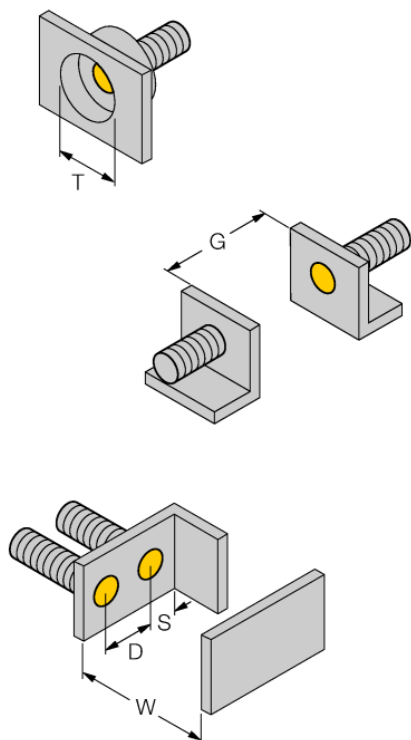
Inductive sensor
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Distance D	60 mm
Distance W	30 mm
Distance T	54 mm
Distance S	25 mm
Distance G	60 mm

Diameter active area B	Ø 18 mm
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The following reduction factors apply when flush-mounted in:

Steel: 0.75

Aluminium: 0.9

Brass: 0.75

Stainless steel: 0.8

Inductive sensor
 Stainless steel front
 BI10-EG18F-AP6X-H1141



Accessories

Type code	Ident-No.	Description	
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-18	6901320	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	